

WHAT IS CLAIMED IS:

- 1 1. A computer implemented method for queue order notification comprising:
 - 2 (a) determining a current position of a patron in a queue;
 - 3 (b) determining a current estimated time remaining for said patron using
4 the current position of the patron and a selected set of historical data; and
 - 5 (c) transmitting queue order information to the patron using a preselected
6 communication channel, and wherein, if the preselected communication channel is a
7 duplex channel, the queue order information comprises a patron-selectable set of
8 queue order information, the patron-selectable set including the estimated time
9 remaining and the current position of the patron in the queue.
- 1 2. The method of claim 1 wherein the set of historical data comprises a queue
2 servicing rate for a preceding time interval, the estimated time remaining determined
3 using a linear extrapolation with said queue servicing rate.
- 1 3. The method of claim 2 wherein the queue servicing rate comprises a rate at
2 which patrons have been served between a current time and a preceding notification
3 time and wherein the set of historical data further comprises seasonal average patron
4 service rates.
- 1 4. The method of claim 1 wherein the steps (a), (b) and (c) are repeated at a
2 preselected notification criterion, and wherein, if the communication channel is a
3 duplex channel, the preselected notification interval comprises a patron-selected
4 notification criterion.

1 5. The method of claim 4 wherein the patron-selected notification criterion
2 comprises one of a set including a preselected notification time interval and a
3 preselected queue position.

1 6. The method of claim 1 further comprising:

2 (d) notifying the patron upon reaching a head of the queue using the
3 communication channel; and

4 (e) if the patron fails to respond after an expiry of a predetermined time
5 interval after step (d), moving the patron to another position within the queue.

1 7. The method of claim 6, wherein the another position within the queue is an
2 end of the queue.

1 8. The method of claim 1 further comprising:

2 (d) if the patron is at the head of the queue, determining if the patron can
3 be accommodated; and

4 (e) if the patron cannot be accommodated, interchanging the current
5 position of the patron and position of a next patron in the queue.

1 9. A computer program product embodied in a tangible storage medium, the
2 program product for queue order notification comprising programming instructions
3 for:

4 (a) determining a current position of a patron in a queue for receiving a
5 service from a service provider;

6 (b) determining, a current estimated time remaining for said patron using
7 the current position of the patron and a selected set of historical data; and

8 (c) transmitting queue order information to the patron using a preselected
9 communication channel, and wherein, if the preselected communication channel is a
10 duplex channel, the queue order information comprises a patron-selectable set of
11 queue-order information, the patron-selectable set including the estimated time
12 remaining and the current position of the patron in the queue.

1 10. The program product of claim 9 herein the set of historical data comprises a
2 queue servicing rate for a preceding time interval, the estimated time remaining
3 determined using a linear extrapolation with said queue servicing rate.

1 11. The program product of claim 10 wherein the queue servicing rate comprises
2 a rate at which patrons have been served between a current time and a preceding
3 notification time and wherein the set of historical data further comprises seasonal
4 average patron service rates.

1 12. The program product of claim 9 further comprising programming instructions
2 for repeating (a), (b) and (c) at a preselected notification criterion, and wherein, if the
3 communication channel is a duplex channel, the preselected notification interval
4 comprises a patron-selected notification criterion.

1 13. The program product of claim 12 wherein the patron-selected notification
2 criterion comprises one of a set including a preselected notification time interval and
3 a preselected queue position.

1 14. The program product of claim 9 further comprising programming instructions
2 for:

3 (d) notifying the patron upon reaching a head of the queue using the
4 communication channel; and

5 (e) if the patron fails to respond after an expiry of a predetermined time
6 interval after step (d), moving the patron to an end of the queue.

1 15. The program product of claim 14 wherein the another position within the
2 queue is an end of the queue.

1 16. The program product of claim 9 further comprising programming instructions
2 for:

3 (d) if the patron is at the head of the queue, determining if the patron can
4 be accommodated; and

5 (e) if the patron cannot be accommodated, interchanging the current
6 position of the patron and position of a next patron in the queue.

1 17. A data processing system comprising:

2 (a) circuitry operable for determining a current position of a patron in a
3 queue for receiving a service from a service provider;

4 (b) circuitry operable for determining, a current estimated time remaining
5 for said patron using the current position of the patron and a selected set of historical
6 data; and

7 (c) circuitry operable for transmitting queue order information to the
8 patron using a preselected communication channel, and wherein, if the preselected
9 communication channel is a duplex channel, the queue order information comprises a
10 patron-selectable set of queue-order information, the patron-selectable set including
11 the estimated time remaining and the current position of the patron in the queue.

1 18. The data processing system of claim 17 wherein the set of historical data
2 comprises a queue servicing rate for a preceding time interval, the estimated time
3 remaining determined using a linear extrapolation with said queue servicing rate.

1 19. The data processing system of claim 18 wherein the queue servicing rate
2 comprises a rate at which patrons have been served between a current time and a
3 preceding notification time and wherein the set of historical data further comprises
4 seasonal average patron service rates.

1 20. The data processing system of claim 17 wherein (a), (b) and (c) further
2 comprise circuitry operable for, patron at a preselected notification criterion,
3 repeating the operations of:

- 4 (i) determining a current position of the patron;
5 (ii) determining a current estimated time remaining; and
6 (iii) transmitting queue order information to the patron.

1 21. The data processing system product of claim 20 wherein the patron-selected
2 notification criterion comprises one of a set including a preselected notification time
3 interval and a preselected queue position.

1 22. The data processing system of claim 17 further comprising:

2 (d) circuitry operable for notifying the patron upon reaching a head of the
3 queue using the communication channel; and

4 (e) circuitry operable for, if the patron fails to respond after an expiry of a
5 predetermined time interval the operation in (d), moving the patron to an end of the
6 queue.

1 23. The data processing system of claim 22 wherein the another position within
2 the queue is an end of the queue.

1 24. The data processing system of claim 17 further comprising:

2 (d) circuitry operable for, if the patron is at the head of the queue,
3 determining if the patron can be accommodated; and

4 (e) circuitry operable for, if the patron cannot be accommodated,
5 interchanging the current position of the patron and position of a next patron in the
6 queue.